

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

CHRISTINE B. COLLINS, Independent)	No. 03-cv-2958 (Darrah)
Administrator of the Estate of ROBERT L.)	
COLLINS, Deceased,)	<i>consolidated with</i>
)	No. 03-cv-2966
Plaintiff,)	No. 03-cv-2998
)	No. 03-cv-3162
vs.)	No. 03-cv-3166
)	
THE UNITED STATES OF AMERICA,)	Trial: February 5, 2007
)	Time: 1:00 p.m.
Defendant.)	Courtroom: 1203
)	

**DEFENDANT UNITED STATES' PRETRIAL PROPOSED
FINDINGS OF FACT AND CONCLUSIONS OF LAW**

DEFENDANT UNITED STATES OF AMERICA hereby submits the following proposed findings of fact and conclusions of law.

INTRODUCTION

On February 8, 2000, two small airplanes collided near Waukegan, Illinois. Three persons were killed: Robert Collins, Herman Luscher, and Sharon Hock. Mr. Collins and Mr. Luscher were both private pilots, and were flying in Mr. Collins' airplane, a Zlin. Ms. Hock was a student pilot, flying her second solo in a Cessna. The accident caused property damage on the ground when one of the airplanes crashed into a cancer treatment facility, the Cancer Treatment Centers of America.

This lawsuit was brought against the United States by the medical facility and the decedents' estates pursuant to the Federal Tort Claims Act, ("FTCA"), 28 U.S.C.

§§ 1346(b), 2671-80. The United States contested jurisdiction, and contends that the Court lacks subject matter jurisdiction under both the discretionary function exception to the FTCA, 28 U.S.C. § 2680(a), and the independent contractor exclusion, 28 U.S.C. § 2671; *see Alinsky v. United States*, 415 F.3d 639 (7th Cir. 2005).

At a full trial on the merits, the Court heard the testimony of witnesses, assessed their credibility, reviewed the exhibits admitted into evidence, and heard the argument of counsel. A simultaneous trial was held as to defendant Midwest Air Traffic Control, Inc., the company that operated the Waukegan Air Traffic Control Tower and provided air traffic control services to the airplanes. After careful consideration of all of the evidence of record, the Court concludes that Congress has not waived the government's sovereign immunity for this lawsuit, and the Court lacks jurisdiction over the claims against the government. Because the Court lacks jurisdiction, the Complaints must be dismissed. Fed. R. Civ. P. 12(b)(1).

In the alternative, the Court finds and concludes that the FAA did not cause or contribute to causing these two airplanes to collide. The United States is thus entitled to judgment on all of Plaintiffs' claims. There was no negligence by any federal employee. The cause of the accident was the negligence of Pilot Robert Collins, who breached the standard of care of a reasonable pilot by misreporting his position, failing to follow instructions to keep his speed up, failing to see and avoid the Cessna, and running into the Cessna from behind. The Court finds that Mr. Luscher, an experienced pilot, also had an opportunity to see the Cessna and avoid the collision by using his own set of controls in Mr. Collins' airplane. The Court further finds that Mr. Collins was flying without a valid

pilot's license due to unreported disqualifying medical conditions, and his medical impairments contributed to his failure to maintain vigilance so as to see and avoid the Cessna with which he collided. These medical impairments affected Mr. Collins' ability to evaluate the threat of collision properly, to visually scan and acquire the Cessna, and to take evasive action.

The Court makes the following findings of fact and conclusions of law pursuant to Rule 52(a) of the Federal Rules of Civil Procedure.

I. FINDINGS OF FACT

A. The Federal Aviation Regulations

1. The FAA promulgates the Federal Aviation Regulations ("FARs"), setting forth minimum safety standards and required operational procedures for pilots and aircraft. The FARs are codified in the Code of Federal Regulation, Title 14, and are widely published and available.

2. All pilots operating within the United States, including the pilots involved in this accident, are required to know and comply with the FARs.

3. In this instance, some of the FARs promulgated for the safe and proper operation of the aircraft within the National Airspace System are directly relevant to the facts of this case.

4. Section 91.3 of the FARs provides: "The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft." 14 C.F.R. § 91.3.

5. Section 91.111 provides: “No person may operate an aircraft so close to another aircraft as to create a collision hazard.” 14 C.F.R. § 91.111.

6. Section 91.113 provides: “When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft.” 14 C.F.R. § 91.113.

7. Section 91.13 provides: “No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.” 14 C.F.R. § 91.13(a).

8. The FAA publishes the Aeronautical Information Manual (“AIM”) for pilots. (Excerpts, Trial Ex. 600.) Pilots are required to be familiar with the provisions of the AIM. The AIM provides pilots with basic flight information and Air Traffic Control procedures for use in the National Airspace System, including, among other things, prudent pilot operating practices as well as information about the services they can reasonably expect from air traffic controllers. In short, the AIM contains the fundamentals required to fly in the United States as well as items of interest to pilots concerning aviation health and safety. The AIM is updated quarterly and is available to pilots at retail outlets or through subscription. The Court finds the AIM useful in determining the standard of care of a reasonably prudent pilot.

9. The AIM states: “When meteorological conditions permit, regardless of type of flight plan or whether or not under control of a radar facility, the pilot is

responsible to *see and avoid other traffic*, terrain, or obstacles.” (Trial Ex. 600, AIM ¶ 5-8, emphasis added.)

10. The AIM contains a section on “Unexpected Maneuvers in the Airport Traffic Pattern,” which states:

ATC [Air Traffic Control] service is based upon observed or known traffic and airport conditions. Controllers establish the sequence of arriving and departing aircraft by requiring them to adjust flight as necessary to achieve proper spacing. These adjustments can only be based on observed traffic, *accurate pilot reports*, and anticipated aircraft maneuvers. Pilots are expected to cooperate so as to preclude disrupting traffic flows or creating conflicting patterns. The pilot-in-command of an aircraft is directly responsible for and is the final authority as to the operation of the aircraft.

(Trial Ex. 600, AIM ¶ 4-3-5, emphasis added.)

11. The AIM advises pilots not to rely on radar, even if the tower is equipped with a radar display:

A few of the radar equipped towers are authorized to use the radar to ensure separation between aircraft in specific situations, while still others may function as limited radar approach controls. The various radar uses are strictly a function of FAA operational need. The facilities may be indistinguishable to pilots since they are all referred to as tower and no publication lists the degree of radar use. THEREFORE, WHEN IN COMMUNICATION WITH A TOWER CONTROLLER WHO MAY HAVE RADAR AVAILABLE, DO NOT ASSUME THAT CONSTANT RADAR MONITORING AND COMPLETE ATC RADAR SERVICES ARE BEING PROVIDED.

(Trial Ex. 600, AIM ¶ 4-3-2(e).)

B. The Waukegan Air Traffic Control Tower

12. The Waukegan Air Traffic Control Tower provided services to the pilots of the two airplanes that collided.

13. The Waukegan Tower has always been operated by a private contractor

since it was opened in 1988.

14. The Waukegan Tower was operated in February 2000 (and continues to be operated up to the present date) by a private contractor, Midwest Air Traffic Control, Inc.

15. Midwest is a private company with its headquarters in Overland Park, Kansas. *See* Midwest's Web Page, www.atctower.com.

16. There were no FAA employees in the Waukegan Tower at the time of the accident.

17. FAA employees did not supervise the controllers at the Waukegan Tower.

18. Two Midwest controllers were on duty in the Tower at the time of the accident: local controller Gregory Fowler, who was also the Manager of the Waukegan Tower, and George Kline Edler, the ground controller. There were no other people in the Tower at the time.

19. Mr. Fowler was the Manager of the Waukegan Tower, and had worked there since 1990. Mr. Edler had worked at the Waukegan Tower since 1991.

20. The person working as the local controller communicates with airplanes on the ground on the active runways, and in the air approaching and departing the airport. He issues instructions or clearances to airplanes that take off or land at the airport.

21. The person working as the ground controller communicates with airplanes taxiing on the airport property once they are off the active runways. He issues taxi instructions.

22. Mr. Fowler was communicating on the Local Control (or "Tower") frequency with both airplanes at the time of the collision. All airplanes on the Tower

frequency could hear the controller and one another.

23. As a Tower controlling Class D airspace, the Waukegan Tower did not provide Visual Flight Rules (“VFR”) aircraft the service of separating airplanes from one another in mid-air: “Separation for VFR Aircraft. No separation services are provided to VFR aircraft.” (Trial Ex. 600, AIM ¶ 3-2-5(e).) That is the responsibility of the pilots.

C. The FAA Contract Tower Program

24. The FAA Contract Tower Program Branch, located at FAA Headquarters in Washington, D.C., is responsible for the contract administration for over 200 privately-operated air traffic control towers throughout the country. (Trial Ex. 2.)

25. The Contract Tower Program provides air traffic control services at towers that would not otherwise be staffed by the FAA because they are too expensive to operate. (Trial Ex. 613, OIG Report at 2.) The program, which was started in 1982, saves money by sharing costs with local airports and communities. The contractor can also provide controllers for less money than the FAA by being free of collective bargaining agreement work rules and administrative tasks.

26. The Department of Transportation’s Office of the Inspector General issued an audit of the Contract Tower Program in April 2000, finding that “contract towers continue to provide cost-effective services that are comparable to the quality and safety of FAA-operated towers. For example, the level of operational errors in FY 1999 at contract towers was comparable to the level of operational errors at FAA VFR towers.” (Trial Ex. 614, OIG Audit Report, 4/12/00, No. AV-2000-079, at ii.)

27. The report further found that “users remain very supportive of the Program

and believe that the services they receive at contract towers are comparable to FAA-operated towers.” *Id.*

28. In September 1994, the FAA awarded Midwest the Contract to operate all contract towers in the Great Lakes Region, an eight-state region centered on Illinois. One of the towers was the Waukegan Tower. (Trial Ex. 1, Contract.) The Contract between Midwest and the FAA was in effect for about six years before the parties entered the next contract. The Contract and the FAA’s authority to enter the contract are discussed in detail in *Alinsky v. United States*, 415 F.3d 639, 644-48 (7th Cir. 2005).

29. Another Midwest-operated tower under the Contract was the Meigs Tower in downtown Chicago. The relationship between Midwest and the FAA at the Meigs Tower was exactly the same as the relationship between Midwest and the FAA at the Waukegan Tower. The same Contract applied to both towers, with separate “options” exercised for Meigs and Waukegan. (Trial Ex. 1, Contract.)

30. In the documents Midwest submitted to the FAA during the bidding process, Midwest represented that “[o]ur facility managers are essential for the successful operation of our facilities. They are directly responsible for the day to day activities and operations of their facilities.” (Trial Ex. 200 at Bates No. 0101.)

31. The United States did not control Midwest’s day-to-day operation of the Waukegan Tower. (Trial Ex. 1, Contract; Trial Ex. 200, Midwest’s Response to FAA’s Solicitation for Bids at Bates No. 0101; Thomas Dep. at 238-39.)

D. Evaluations Were Conducted Every Two Years

32. According to the Contract, Midwest was responsible for hiring qualified

controllers, training them, staffing the towers, conducting its own quality assurance program, and everything else required to staff and operate air traffic control towers on a day-to-day basis. (Trial Ex. 1, Contract; Trial Ex. 200, Midwest's Solicitation Response.)

33. The FAA retained the right to evaluate the contractor's performance: “C.5.6 Evaluations: FAA will conduct full-facility, followup, and in-flight/preflight evaluations at FCT [FAA Contract Tower] locations in accordance with FAA Order 7010.1.” (Trial Ex. 1 at C-8.)

34. The Order that governs the FAA's administration of the FAA Contract Tower Program, FAA Order 7210.54, does not require any additional evaluations of the contractor beyond those that were conducted at Waukegan Tower before the accident. (Trial Ex. 3, FAA Order 7210.54A, para. 15, p. 14.)

35. Under FAA Order 7010.1, “Air Traffic Evaluations,” full-facility evaluations “will normally be conducted once every 2 years at each air traffic facility.” (Trial Ex. 401, Order 7010.1K at 7.)

36. The FAA conducted a full-facility evaluation of the Waukegan Tower on August 24-25, 1999, about six months before the accident. The FAA assessed 104 items, monitored controllers on position for 12 hours, conducted 4 interviews, and reviewed data. (Trial Ex. 42.)

37. The FAA was critical of two minor areas, which Midwest corrected by November 1999. Neither was related to the accident. (Trial Ex. 43.)

38. The Court finds that the full-facility evaluation was conducted in accordance with Order 7010.1. (Trial Ex. 401.)

39. Neither the Contract nor Order 7010.1 requires any other type of evaluation.

40. Order 7010.1 applies to “in-flight/preflight evaluations.” (Trial Ex. 401, Order 7010.1 at 3.)

41. Although the Contract and Order 7010.1 mention *preflight* evaluations, that type of evaluation is done only at Flight Service Stations – facilities that give preflight information to pilots. (Trial Ex. 401, Order 7010.1K at 8: FAA “shall conduct at least two preflight evaluations annually on each AFSS/IAFSS/FSS . . .”)

42. *In-flight* evaluations can be done at towers, but are discretionary. During an in-flight evaluation, an inspector will fly to an airport and evaluate the services received during the flight. Order 7010.1 lists the services that will normally be assessed during an in-flight evaluation (Trial Ex. 401, Order 7010.1 at 9).

43. Order 7010.1 also specifies *who* may perform an in-flight evaluation, because special credentials are needed to perform such an evaluation: “In-flight/preflight evaluations shall be conducted by individuals assigned to Washington headquarters or a RATD [Regional Air Traffic Division] who have been issued an Air Traffic Evaluation Credential, FAA Form 7010-2.” (Trial Ex. 401, Order 7010.1 at 8-9.)

44. In-flight evaluations are expensive because the agency must pay for airplane time. Such evaluations are less practical and detailed than full-facility evaluations because the evaluator can only observe one controller at a time during his flight. The agency must balance the cost of conducting an in-flight evaluation with the likely benefit of assessing the controller on duty to decide whether to conduct an in-flight evaluation. In times of budget shortages, the agency does not do many in-flight

evaluations. (Trial Ex. 1004 at 10-11.)

45. The Court finds that Order 7010.1 does not require in-flight evaluations to be done, nor does it set a specific schedule for doing in-flight evaluations. The Court finds that the FAA complied with Order 7010.1 in all respects.

46. The FAA's biennial spot-checking does not substitute for Midwest's own quality assurance program. Midwest has its own quality assurance program, and is responsible for conducting its own internal evaluations. (Trial Ex. 1, Contract, C.4.8 at p. C-5; Trial Ex. 200 at Bates No. 0018-19; Trial Ex. 619, Midwest's Quality Assurance Order.)

E. Terminal Radar Displays at Non-Radar Towers

47. At the time of the accident, the Waukegan Air Traffic Control Tower was classified as a Visual Flight Rules (VFR) Tower, also known as a "non-radar tower."

48. Like most non-radar towers, the Waukegan Tower was not equipped with any sort of radar or terminal radar display.

49. A terminal radar display is a screen mounted in a control tower cab (the glass-enclosed top of the tower) that allows tower controllers to view a presentation of data from a nearby FAA radar facility.

50. There are two types of terminal radar displays: certified and uncertified.

51. The BRITE (Bright Radar Indicator Terminal Equipment) or DBRITE (Digital BRITE) system is a *certified* system, meaning it has been tested and certified to stringent criteria for accuracy. It is tested and maintained to specific performance standards on a regular schedule. Its design and maintenance ensure that the display

depicts accurate information. Tower controllers, once they are properly qualified, may use it to provide full radar services to aircraft. It can take years of training for a controller to be qualified to provide radar services.

52. DBRITEs are scarce and no longer manufactured. Its production run slowed and then stopped in the 1990s in anticipation of the next-generation radar equipment, called STARS (Standard Terminal Automation Replacement System). STARS includes a terminal radar display. The FAA was also working on an interim tower display, called the Tower ACD (Automated Color Display). (Morgan Dep. at 32.)

53. STARS was the agency's top equipment priority at the time. It was specifically approved and funded by Congress. (Morgan Dep. at 108.)

54. The FAA planned to meet any need for tower displays through STARS, ACDs, and existing BRITE scopes. (Morgan Dep. at 32, 52-53.) As STARS was installed at towers with DBRITEs, the DBRITEs would be "waterfallled" to towers without DBRITEs. (Morgan Dep. at 28.)

55. In the 1990s, engineers and private companies worked to develop lower-cost radar displays to sell to the FAA as the production of DBRITEs ended. Although the agency tested, installed, and used some of this equipment, it did not adopt or support any of these radar displays on a national level, choosing instead to stick with the systems it was already developing and that Congress had already approved and funded. (Morgan Dep. at 87-88, 108, 160.)

56. Equipment vendors try to sell new equipment to the FAA all the time. Mr. Ronald Morgan, the Director of Air Traffic Services at FAA Headquarters, testified that

he had vendors who “came in and saw me every day, with all kinds of pieces of equipment that did all kinds of things.” (Morgan Dep. at 107.)

57. The TARDIS (Terminal Radar Display Information System) is one of the *uncertified* radar systems. It was developed by an FAA engineer named Michael Risley, who helped install it in a handful of FAA facilities.

58. Mr. Risley later started a corporation to sell the TARDIS after the FAA declined to sponsor it as a national FAA program. The FAA released the rights of the TARDIS to Mr. Risley in August 2001. (Risley Dep. at 69-70, 299-304.)

59. Mr. Risley has sold one TARDIS since he started his company, to the airport in Tupelo, Mississippi. (Risley Dep. at 303.)

60. TARDIS is a computer-based system, using a standard personal computer and monitor. Because it is not certified, its use by tower controllers is very limited. An uncertified display may be used, under the right circumstances, to help a controller visualize the general location of planes in and around the tower airspace that are not in the controller’s visual field. A controller cannot use information from an uncertified display to provide radar services or traffic advisories. (Trial Ex. 15, FAA Order 7110.65 at ¶ 3-1-9.)

61. A controller cannot use information from an uncertified display as a basis for advising one aircraft of a potential conflict with another aircraft. (Trial Ex. 15 at ¶ 3-1-9; Timmerman Dep. at 170.)

62. The TARDIS was rarely installed and was highly unusual. For example, there are 5,288 public use airports in the United States. Of those airports, 517 have air

traffic control towers. <Http://www.atctraining.faa.gov/site/factbooks/aug05.pdf>. Of those towers, only nine had a TARDIS at the time of the accident. Thus, only 1.7% of the air traffic control towers in the United States had a TARDIS at the time of the accident.

63. Of the 517 air traffic control towers, about 219 are non-radar towers. (Trial Ex. 2, ¶ 4.)

64. Non-radar towers provide services to airplanes operating under Visual Flight Rules, in airspace where pilots have the primary responsibility to see each other and avoid collisions. 14 C.F.R. § 91.113; *Cappello v. Duncan Aircraft Sales of Fla., Inc.*, 79 F.3d 1465, 1470 (6th Cir. 1996).

65. Non-radar towers do not provide radar services, such as separation of aircraft. (Fossey Dep. at 58-59; Thomas Dep. at 47-54, 153-55.)

66. In 2000, 84 VFR towers (38%) had some type of radar display.

1. **FAA's Decision-Making Process for *Certified Displays* (a/k/a BRITE, D-BRITE, STARS)**

67. The FAA uses many different factors to make equipment allocation decisions. FAA Order 7031.2C, "Airway Planning Standard Number One – Terminal Air Navigation Facilities and Air Traffic Control Services," known as the APS-1, contains the investment policy and criteria used in establishing the eligibility of locations for air traffic control facilities, services, or certified equipment. (See Belger Dep. at 116; Trial Ex. 4, APS-1).

68. The APS-1 sets forth FAA policy as follows: "[S]ince the agency must operate, maintain, and improve the air navigation system within defined budgetary

limitations, it is impossible, and it is not economically feasible to satisfy all operational requirements.” (Trial Ex. 4, APS-1 at 1.)

69. The APS-1 further states that even if a facility meets the criteria for equipment, the FAA does not guarantee that it will get any equipment: “Satisfying criteria specified herein does not constitute a commitment by the Federal Aviation Administration to provide, modify, or discontinue eligible facilities or services.” (Trial Ex. 4, APS-1, Forward.)

70. The goal of equipment allocation is to “benefit the greatest number of users for the lowest cost to the government consistent with safety and operational efficiency.” (Trial Ex. 4, APS-1 at 1.)

71. The APS-1 specifies minimum activity levels for facilities to become *candidates* for equipment improvements. Although air traffic levels are a measurable indication of the need for air traffic control services, “they do not, however, cover all situations which may arise.” (Trial Ex. 4, APS-1 at 5.)

72. “[A]ir traffic demand does not by itself always constitute a requirement for an air navigation facility or air traffic control service.” *Id.*

73. In addition to air traffic demand, the FAA considers many factors in making decisions about the installation of radar equipment. These include economics, cost/benefit ratios, the number of users at an airport, the best way to accomplish orderly distribution of equipment, the operational requirements of an airport, air traffic demand, general terrain features, and climatological phenomena such as heavy snow, ice, fog, or other local conditions that can adversely affect aircraft operations or the safety of the

flying public. (Trial Ex. 4, APS-1 at 5.)

74. Given the political nature of the government, politics may also play a role in which airport receives which equipment. The Administrator of the FAA has the discretion to respond to requests from members of Congress, the public, or the media for equipment at airports in their home districts. (Belger Dep. at 123; Morgan Dep. at 55.)

75. These factors explain why the FAA spends more money at airports like O'Hare (around 800,000 air carrier operations and almost 1 million total operations per year) than at airports like Waukegan (no air carrier operations and around 80,000 total operations per year).

76. The variety of factors to be considered shows why the Congress leaves it to the FAA's discretion to allocate equipment rather than setting hard and fast rules based on traffic count or some other criteria.

77. The minimum criteria for a tower to be *considered as a candidate* for a DBRITE are (1) "At least 30,000 annual itinerant operations are recorded" and (2) "Operationally adequate low altitude coverage is assured at the satellite airport." (Trial Ex. 4, APS-1 at 30.)

78. As noted above and as many witnesses will testify, meeting the criteria does not mean a tower will actually *get* the equipment – it simply means the tower can be a *candidate* for the equipment. (Brown Dep. at 64-65; Thomas Dep. at 156; Timmerman Dep. at 108-09.)

79. The second criterion (operationally adequate low altitude radar coverage) has no official definition. FAA officials, exercising their judgment and discretion,

interpreted it differently. (Timmerman Dep. at 86-88.) These interpretations included coverage at 1,000 feet above the ground, 500 feet above the ground, or all the way to the ground. (Timmerman Dep. at 88.) Some months after the accident, FAA Headquarters employee John Timmerman made what he called an “interpretation” of what he thought “operationally adequate low altitude radar coverage” meant, (Timmerman Dep. at 217-20), but his interpretation (1,000 feet above the ground) was not an officially recognized definition, and FAA officials continue to interpret the term in different ways.

80. As former O’Hare Tower Manager Michelle Behm testified, the radar coverage of the Waukegan airspace from O’Hare’s radar has always been spotty. The coverage improved over the years due to a series of system upgrades at the O’Hare radar, but it has never been great. The coverage also fluctuated up and down at different times. It is unknown whether Waukegan had operationally adequate low altitude radar coverage before the accident, under any of the possible interpretations of the inherently vague term. (Trial Ex. 1004.)

81. Plaintiffs place a great deal of importance on a post-accident e-mail sent to Mr. Timmerman during the list revision process. Mr. Timmerman testified that the Great Lakes Regional Office had previously told him that Waukegan lacked adequate radar coverage, but he heard that investigators had discovered radar hits on the accident aircraft, indicating that radar coverage may now be adequate. (Timmerman Dep. at 88-95.)

82. Mr. Timmerman then asked the Great Lakes Region to revalidate the radar coverage at Waukegan, just as he had been asking dozens of other airports as part of the list revision. The e-mail response from the staff specialist at the Great Lakes Region states:

John: we have added both Waukegan and Traverse City to the list for candidate facilities for tower displays. Traverse City had 67,846 itinerant operations in CY-99. Waukegan had 41,629 itinerant operations in CY-99. Both have adequate radar coverage to justify a display. As I said on the phone, we will also revisit the issue to see if there are any other facilities that meet the criteria that we may have missed. Thanks for all your help. If you need anything else please let me know.

(Trial Ex. 6.)

83. By October 2000, the Great Lakes Region had added six more towers to the list in addition to its top five and Waukegan/Traverse City: Bloomington, Jackson, Burke Lakefront, Cuyahoga, Waukesha County, and Kenosha. (Trial Ex. 19.) Except for the Jackson Airport, all of those additional towers had more itinerant traffic than Waukegan.

(Trial Ex. 19.)

84. As Mr. Timmerman and others testified, there was uncertainty in the FAA about the adequacy of the radar coverage at Waukegan. (Timmerman Dep. at 94-95; Trial Ex. 1004.)

85. Mr. Tremblay's e-mail adds nothing more to this case than the fact that radar coverage was "adequate," in his opinion, on the day that he checked it. The e-mail does not indicate that coverage was adequate before that day, nor has any witness testified that radar coverage was adequate any time prior to the e-mail. Accordingly, the e-mail does not establish that radar coverage was adequate for Waukegan to be on the list for a

certified radar display before the accident.

86. Candidates for certified displays are placed on a priority list to be considered for BRITE scopes if funding or used BRITES become available. (Morgan Dep. at 43-44, 184-86; Timmerman Dep. at 226-29, 317-19.)

87. The list was stagnant for a number of years in the 1990s because there was no equipment and no funding for the list. In 1995, the FAA removed a large number of facilities from the list, including all contract towers, because the DBRITE was soon to be replaced by STARS, so it made no sense to continue installing new DBRITES. (Trial Ex. 24.) Contract towers thus could not be candidates for a terminal radar display until FAA Deputy Administrator Monte Belger rescinded that policy in 1998. (Trial Ex. 22.) There were still no DBRITES to go around in 1998, however, and by then the STARS development had been significantly delayed. (Morgan Dep. at 149, 154, 173.)

88. In fiscal year 2000 (fall of 1999 to fall of 2000), the FAA revised the list to prepare for the future installation of the STARS system. (Timmerman Dep. at 43, 62, 66.)

89. The list evolved significantly over the year, with changing interpretations of the criteria, and changing capabilities of the equipment to be provided. (Timmerman Dep. at 42.)

90. John Timmerman, an employee at FAA Headquarters involved in updating the list, testified, “[w]e looked at a lot of different factors and generated the list, and . . . that list grew over time, as we had people look at various aspects of providing that service.” (Timmerman Dep. at 44.)

91. The list was a work in progress until the fall of 2000, increasing from 51 towers to 89 towers during the year. Mr. Timmerman and his staff had multiple back-and-forth communications with FAA regional offices over the entire one-year period, adding and removing towers from the list during the time. (Trial Ex. 604, Correspondence re: updating the list.)

92. The Waukegan accident happened in the middle of this list-revision process. After the accident, Mr. Timmerman asked the Great Lakes Region to re-evaluate the adequacy of radar coverage at Waukegan with his new interpretation of “operationally adequate low altitude radar coverage.” (Timmerman Dep. at 90, 92.)

93. Waukegan was then placed on the list, at which time it was ranked 51st out of the 71 towers on the national list. (Trial Ex. 32, List dated Feb. 29, 2000.)

94. By the end of the fiscal year, the national list had grown to 89 towers, and Waukegan was ranked 58th on the list. (Trial Ex. 604, List dated 8/31/00 Final Update for FY2000.)

95. None of the top five candidates for a terminal radar display from the Great Lakes Region that were on the list in 1997 (Trial Ex. 10, Woods letter dated 7/30/97) had received a display by October 2000. (Trial Ex. 19.) In terms of traffic count, the Waukegan Tower had less traffic than ten of the thirteen candidate towers submitted by the Great Lakes Region in October 2000, after Anoka, Meigs Field, Rock County, Kellogg, Traverse City, Bloomington, Burke, Cuyahoga, Waukesha County, and Kenosha. (Trial Ex. 19.)

96. The Court finds immaterial the issue of whether the Waukegan Tower

should have been placed on the candidate priority list at an earlier date. Given Waukegan's low position on the list, it would not have received a certified radar display before the accident even if it had been on the list. In February 2000, the FAA considered 50 other air traffic control towers to be a higher priority than Waukegan for a radar display, and the agency did not have any certified displays to install, since the STARS system was encountering lengthy delays. (Morgan Dep. at 154.) There was little movement on the list until STARS began to be installed more widely, after the date of the accident.

97. When a piece of equipment actually became available, or if there is an official request for such equipment, FAA staff revalidate the need for equipment at each facility to decide which facility should be considered for the equipment.

98. Even if the certified tower radar display candidate list was considered to be a material fact, there is no evidence that Waukegan actually met the criteria to be on the list before the accident.

2. Decision-Making for Uncertified Displays (e.g., TARDIS)

99. With respect to *uncertified* terminal radar displays, there is no priority list and no installation criteria. (Morgan Dep. at 209; Timmerman Dep. at 50.)

100. The FAA has never sponsored uncertified displays at the national level. The agency determined in December 1997 as a formal policy that there is no defined operational need for uncertified displays. (Trial Ex. 17, Morgan Memo 12/19/97; Trial Ex. 48, Morgan Memo 9/23/99.)

101. This policy does not mean uncertified displays were absolutely prohibited.

The FAA allowed uncertified displays at some non-radar towers where the display system was developed, installed, maintained, and supported by an FAA regional office or by the local airport authority (sponsor). (Trial Ex. 17, 48.)

102. Although it was possible for the FAA to install an uncertified display, such as a TARDIS, in the Waukegan Tower, the agency had no reason to do so. A TARDIS was never requested by the airport authority or by Midwest. There is no evidence that anyone ever considered a TARDIS for Waukegan before the accident, or had any reason to do so.

103. At the time of the accident, there were only nine TARDIS systems installed in the entire world. FAA officials had many concerns about the TARDIS, and were not inclined to install it any more often than necessary. For these and other reasons, there was no TARDIS in the Waukegan Tower before the accident, placing Waukegan among the 98% of air traffic control towers in the United States without a TARDIS.

104. Given that agency policy was *not* to support TARDIS on a national level and there had been no Congressionally appropriated funds for it, taking funds away from an approved project to install a TARDIS at the Waukegan Tower – which had not even requested one – would have been highly unusual.

105. All of the TARDIS systems in operation in 2000 were installed for experimental testing, in response to congressional request, or because the local airport authority paid for the system. (Risley Dep.)

106. Following the accident, the FAA responded to political and public pressure and installed a TARDIS at Waukegan. The decision was made by Monte Belger, the

Acting Deputy Administrator of the FAA. (Belger Dep. at 21.)

107. Mr. Belger was second in command to the FAA Administrator, Jane Garvey. (Belger Dep. at 11-12.)

108. Mr. Belger testified that no policy or statute required the installation of a TARDIS at Waukegan, but, in his judgment, "it was the right thing to do at that time." (Belger Dep. at 21.)

109. Some of the factors he considered were that the accident was a major news event in the Chicago area, and that the users of the airport were interested in having a radar display installed in the tower after the accident. (Belger Dep. at 25-26, 123; *see also* Exs. 9 & 20, correspondence from legislators.)

110. There was never any requirement for the FAA to install the TARDIS at Waukegan. No statute, regulation, or policy has ever required the FAA to put a radar display in any non-radar tower.

111. The Contract did not require that a radar display be installed at any contract tower. (Trial Ex. 1.)

112. With respect to equipment, the Contract states:

FAA will furnish the contractor with all operational equipment required for the provision of ATC and weather reporting services, such as: voice recorder, wind speed and direction readout, telecommunications equipment to operational positions with loudspeaker, altimeter, clock, radio frequency selector, light gun, transmitter/receivers, operational data transfer lines (where applicable), space for airport and approach light controls, and headsets/handsets. The FAA will provide necessary office furnishings for the administrative space, such as: desk, chair, and file cabinet.

(Trial Ex. 1, Contract ¶ C.6.1, at p. C-8.)

113. The Contract does not mention a radar display in that paragraph, or anywhere else. Accordingly, the Court finds that a decision to install an uncertified radar display like TARDIS was left entirely up to the FAA, and such decisions were based on social, economic, and political policy factors.

114. The Court finds that Midwest took over the operation of the Waukegan Tower in 1994 with the standard equipment for a Non-Radar Tower. (Trial Ex. 1, Contract, at p. C-8.) The equipment provided is the equipment that the agency considers necessary to operate a Non-Radar Tower safely. If Midwest believed it needed additional equipment, it could have made a formal request for such equipment through the contracting chain of command, at which time the FAA would have performed a review of the request. This was never done in the six years that Midwest operated the Tower before the accident.

115. There was nothing unusual about the Waukegan Tower. The FAA had no reason to suspect that Waukegan had some special need for additional equipment, given that there had been no request for one. The Waukegan Tower had ample opportunity to make a request if it believed it could justify the expense of the additional equipment.

116. The FAA chose, for a number of reasons, not to sponsor, certify, or promote TARDIS as a national program. (Belger Dep. at 83-84, Timmerman Dep. at 240, 318; Morgan Dep. at 150-61.)

117. For example, Ronald Morgan, Director of Air Traffic Services, testified that the agency decided not to put its resources into TARDIS because the FAA had a different, Congressionally-approved plan in place for tower radar displays, and because the agency

had concerns about TARDIS's capabilities. (Morgan Dep. at 28-29, 32.)

118. Mr. Morgan explained: "I didn't have a need for an uncertified system. I had a need for a certified system. And I had two of them on the books – one was called STARS and one was called the Tower ACD Program." (Morgan Dep. at 53.)

119. Mr. Morgan further explained that even if TARDIS had the same capabilities as other tower radar displays, he would not have created a short-term program for TARDIS because he had Congressionally appropriated funds to create the two long-term programs for radar displays, and he did not have any money to support a national TARDIS program. (Morgan Dep. at 108.)

120. There was also debate in the agency about whether TARDIS improved safety in a Visual Flight Rules environment, where no radar services are provided. (Brown Dep. at 265-66; Thomas Dep. at 154-55.)

121. Mr. Morgan testified:

If I believed it improved safety, I would have made a decision to put these things out there. There were lots of things that would improve safety . . . [I]f the pair of binoculars the person is using is getting the job done and is assessed to be adequate for the job they're doing – there is always a better tool out there you can buy and spend money on. It doesn't necessarily change the performance of the system. It's not intuitive that better tools change the performance of the system.

(Morgan Dep. at 115-16.)

122. Mr. Morgan further testified:

Q. With respect to a VFR former Level 1 tower such as Waukegan, is a BRITE scope or a TARDIS or any tower radar display necessary for the safe provision of ATC services?

A. No, it's not. In fact, at large airports, when a tower display becomes

inoperative for some unknown reason, you don't shut the airport down. It may impact the efficiency significantly, but there are procedures in place to continue moving aircraft in a safe and efficient manner.

(Morgan Dep. at 210-11.)

123. Monte Belger confirmed that putting radar in non-radar towers was not a high priority of the FAA: "there wasn't a real high priority for displays at non-radar towers. I mean, *they are by definition non-radar.*" (Belger Dep. at 47, emphasis added.)

124. Mr. Belger further testified that maintaining a non-standard system like TARDIS creates logistical problems, and that radar displays are not required in VFR towers:

Q Well, we've talked about the funding. Let's just talk about the difficulty with respect to ordering. If you get stuff in the FAA inventory, you have to order that from someplace before it's in there, don't you?

A You do.

Q So whether you order it to put it in the inventory or whether you order it on an as-needed basis, a COTS [commercial off-the-shelf] component poses no particular, unique problem for acquisition?

A Well, in my judgment it was a problem. You know, you can disagree, but in my judgment it was a problem.

Q So you felt when you made that statement that having to order commercial off-the-shelf components posed a problem for the FAA?

A For a non-standard system in a non-radar tower for which it is not required to perform their function and for which was not in the budget.

Q Well, you say it's not required to perform their function. Is that your view of tower radar displays with respect to VFR level-1 towers generally?

A I'm not sure I quite understand that question, but –

Q Sure.

A – VFR towers are by definition VFR, not – not radar.

Q Right. So it's your perspective or it's your position, then, that tower radar displays are not in any fashion required at VFR level-1 towers?

A I think that's a fundamental true statement, yes.

Q Okay. Well, why did the FAA put them in, then?

A Well, a lot of times you do things because they might make the job in some certain circumstances easier. A lot of times you do things to try to enhance the tools that the controllers have. A lot of times you do things, as

was done in Waukegan, because the local community really wanted it.

(Belger Dep. at 87-89.)

125. Aside from the concerns of top-level FAA officials, FAA staff and engineers also engaged in debate on the merits of TARDIS. (See, e.g., Ex. 191.)

126. The NAS Change Proposal for the installation of TARDIS at Meigs Field shows employees' concerns about TARDIS. (Trial Ex. 191.) A NAS Change Proposal is required to interface non-standard equipment with National Airspace equipment.

127. These concerns included TARDIS being an "at risk" and "non-baseline" system. Officials were worried about TARDIS not being able to communicate with other regions, and not being factored into future facility expenses and plans. Because TARDIS was not a national program, the region needed to absorb any maintenance expense out of other programs. (Trial Ex. 191.)

128. FAA employees were worried about future maintenance of the TARDIS, given that it was not supported by national resources. There were concerns about interface and reliability:

Note this system does not interface with the ARTS IIIE [radar] system. The system has no automation input to the terminal system. There[fore] there is no reduction in the workload at TRACON [radar facility] or the tower. This system is not in the NAS [National Airspace System] Architecture and is a non baseline system. Because there is no Alphanumeric information but only a broadband is viewed. What is the benefit to the user? Being an eyes extender is the only benefit, does the 50K warrant the Need?

(Trial Ex. 191 at 11.)

129. Another FAA memorandum called the continued use of nonstandard equipment "troubling," and reflected concerns about liability to the FAA if equipment

such as the TARDIS caused an accident, due to its uncertified nature. “Documentation, configuration management, supply support, test procedures, maintenance, and certification do not exist for [TARDIS].” (Trial Ex. 191 at 12.)

130. Another employee was concerned about quality assurance, engineering support, maintenance procedures, Y2K compliance, data security measures, and many other potential problems with the TARDIS. (Trial Ex. 191 at 17.)

131. Another employee was concerned because the TARDIS uses Codex modems, but the agency component “lacks sufficient technical details to determine the operability with the Codex modems.” (Trial Ex. 191 at 24.)

132. These concerns were all part of the policy debate on the wisdom of installing a TARDIS radar display in Non-Radar Towers.

133. In addition, Plaintiffs have failed to prove that one of the accident airplanes would have been displayed on a TARDIS even if one had been installed in the Waukegan Tower before the accident.

134. Ms. Hock’s airplane stopped sending transponder beacon returns, also known as “secondary returns” or “Mode C” information, about halfway into her downwind leg on the accident flight. (Trial Ex. 1017.)

135. Since the TARDIS that was later installed at the Waukegan Tower does not display an airplane if there is no transponder beacon return, Ms. Hock’s airplane would not have appeared on a hypothetical TARDIS for the second half of the accident flight, up to and including the collision. (Risley Dep. at 108-09; Trial Ex. 1017.)

F. Facts of the Accident

1. The Actors

136. The airplanes that collided were a Zlin and a Cessna. Robert Collins and Herman Luscher were in the Zlin, in the pilot and co-pilot seats, respectively.

137. Both Mr. Collins and Mr. Luscher were pilots. Mr. Luscher was a former pilot for the U.S. Navy and held an Air Transport Pilot rating. Mr. Collins had received his pilot's license in 1995 after eighteen years of instruction. (Trial Ex. 1023 at 1.)

138. Mr. Luscher and Mr. Collins were returning from lunch in Wisconsin to the Waukegan Airport, where Mr. Collins kept two airplanes that he owned. Mr. Collins flew out of Waukegan Airport several times a week on either of the two airplanes. (Trial Ex. 1023 at 1.)

139. The Zlin airplane is a low-wing, two-seat airplane. Each seat has a full set of flight controls. The airplane is designed for basic aerobatic training. The Zlin responds quickly to flight control inputs and is easy to maneuver. The airplane has a bubble-style canopy with excellent visibility. Mr. Collins' Zlin had a GPS-based radio aid to navigation installed. This navigation aid is capable of displaying a precise distance between the airplane and a landmark or ground based navigation aid. (Trial Ex. 1023 at 2.)

140. The Cessna airplane had one occupant, student pilot Sharon Hock. Ms. Hock was a flight attendant who was a student pilot. She had been taking frequent lessons for about two months, and was flying her second solo at the time of the accident.

She had been flying at Waukegan the morning and the afternoon of the accident, practicing take-offs and landings with her instructors. (Trial Ex. 1023 at 2.)

141. Another student pilot was flying a Cessna in the Waukegan traffic pattern at the time of the accident, with his instructor in the airplane next to him. The student in the second Cessna was Nathan Tross, and his instructor was Paul Pieri. They observed the collision.

142. The Air Traffic Control Tower was operated by Midwest Air Traffic Control Services, Inc. Two controllers were working at the time of the accident.

2. Scenario at Waukegan Airport Shortly Before Accident

143. Shortly before the accident, Ms. Hock was practicing in the airport pattern – taking off from the runway heading Southwest, flying the rectangular traffic pattern which took her Northeast on a “downwind” leg, then turning right to a Southeast “base” leg, then a final right turn to a Southwest “final approach” leg. Ms. Hock was in a “right hand” traffic pattern, making all turns to the right. (See Trial Ex. 602, ¶ 4-3-2 for depiction of traffic pattern.)

144. The other student joined the pattern shortly before the accident, flying a “left hand” traffic pattern on the other side of the same runway. That meant that the two Cessnas were flying parallel to each other, heading Northeast towards the lake.

145. The Lake Michigan shoreline is about 3 ½ miles from the runway. Pilots flying to Waukegan Airport from the shoreline can line up on the extended centerline of Runway 23 at the shoreline for a “straight-in” approach. By contrast, airplanes in the traffic pattern make a series of 90-degree turns (downwind to base to final) to line up for

the runway. The “final approach” segment is identical. (Trial Ex. 1023 at 3.)

146. The shoreline is a clearly-delineated landmark commonly used as a reporting point by pilots and controllers. This reporting point assists pilots in visually acquiring traffic crossing the shoreline on a straight-in approach. *Id.*

147. Runway 23 has a standard “right hand” traffic pattern, meaning the downwind leg is North of the runway and all turns are made to the right. Ms. Hock was flying this right-hand traffic pattern. *Id.*

3. The Zlin’s First Erroneous Position Report: “Coming Down the Shoreline”

148. At 2:55 p.m. (local time), the Zlin contacted the Tower. Mr. Collins stated his intention to land at Waukegan. (Trial Ex. 160; 1023 at 3.)

149. Controller Fowler asked if the Zlin was “coming down the shoreline?” “Coming down the shoreline” typically means flying over or close to the shoreline. Pilots in single-engine airplanes generally avoid flying more than a mile over water so they can glide to land if the engine fails. (Trial Ex. 1023 at 3.)

150. Mr. Collins responded to Mr. Fowler’s question, “that’s affirmative,” even though, according to radar data, his airplane was actually several miles off the shoreline over Lake Michigan, and continued to fly South out over Lake Michigan. (Trial Ex. 1017, 1023.)

4. The Zlin's Second Erroneous Position Report: "Just a Mile or Two Off the . . . Shoreline"

151. As the Zlin progressed toward the airport, Mr. Fowler again asked for a position report: "Five zulu alpha what's your position[?]" (Trial Ex. 160, at time 2059:48 Zulu, which was 2:59 p.m. local time.)

152. Mr. Collins could have answered this question by providing the airplane's distance from the airport, easily available on his on-board navigation equipment. Instead, Mr. Collins responded, "just a mile or two off the lake ah off the shoreline." (Trial Ex. 160.) The Zlin was, however, 4.0 miles from the shoreline at that time, on the extended runway centerline. (Trial Ex. 1017.)

153. The Court finds that this position report was in error and likely misled the controller and the other pilots in the area.

154. Pilots operating around an airport monitor the transmissions of other pilots and the tower to maintain a mental picture of all traffic in the pattern. This assists them in spotting one another and in understanding their relative positions and sequence to the runway. Tower requests for position reports also tell a pilot that the tower is not relying on radar identification to determine aircraft location. (Trial Ex. 1023 at 4.)

155. Mr. Collins knew that he was not in radar contact from the Waukegan Tower. This was his local "home base" airport, out of which he had operated for years. Moreover, Mr. Collins and Mr. Luscher had previously been informed by Milwaukee Approach Control that they were leaving Milwaukee airspace and that radar service was terminated. "[F]ive zulu alpha *radar service terminated* and a squawk v-f-r good day."

They had switched to a beacon code that is used for all aircraft operating under Visual Flight Rules (VFR) outside radar controlled airspace. (Trial Ex. 160 at 2054:25, p. 2 of 3 Milwaukee transcript.)

5. Zlin's Failure To Keep Speed Up as Directed: "Pedaling as Fast as I Can."

156. Immediately following the erroneous "mile or two off the . . . shoreline" position report, Mr. Fowler tried to clarify where the Zlin was in relation to the approach path, and then requested the Zlin to keep its speed up. The controller asked, "are you straight in still[?]" Mr. Collins responded: "ah yes sir." The controller directed: "keep your speed up as much as feasible cleared to land." Mr. Collins responded: "ok speed up cleared to land thanks." He added: "pedaling as fast as I can."¹ (Trial Ex. 160 at 2059:53 to 2100.01.)

157. Despite accepting the controller's instruction to keep his speed up, radar data shows the Zlin slowed as much as 30 knots between accepting this clearance until the midair collision. This is a significant decrease in speed that required positive pilot action to accomplish in a Zlin. (Trial Ex. 1017, 1023 at 5.)

158. Mr. Collins never informed the controller that he was slowing down, nor did he need to slow down at that time to prepare for landing. (Trial Ex. 160.)

6. Hock on Downwind Reports She Doesn't See Collins

¹ The official Midwest ATC transcript of communications transcribed the word as "peddling," which is a misnomer. The correct spelling should be "pedaling." Mr. Collins was clearly making a light-hearted reference to a pilot of a small plane going as fast as he could, rather than "peddling," which means selling something.

159. Meanwhile, Ms. Hock was on the downwind portion of the traffic pattern (flying parallel to the runway at a designated altitude) when Mr. Fowler alerted her to look for the Zlin. Although she had been able to visually acquire other airplanes in her earlier flights with no problem, she was unable to locate the Zlin. (Trial Ex. 1023 at 5.)

160. She asked Mr. Fowler to “call my base please.” This meant she was unsure when she would be safely past the Zlin so that she could begin her next right turn to base leg behind the Zlin. (Trial Ex. 1023 at 5.)

161. It is likely that she did not see the Zlin because she was looking for it closer to the airport than its actual position, due to Mr. Collins’ position reports. (Trial Ex. 1023 at 5.)

7. Mr. Collins’ Third Erroneous Position Report: “Just Crossing the Shoreline”

162. The controller again asked Mr. Collins where he was at 3:01 p.m. local time. Mr. Collins responded: “just crossing the shoreline.” (Trial Ex. 160 at 2101:43.)

163. Based on the controller’s previous directions to turn final at the shoreline for Runway 23, the Zlin should have been on the extended runway centerline, at the point where that imaginary line crosses the shore of Lake Michigan. This airborne position is easy to discern from the air. (Trial Ex. 1023 at 6.)

164. In reality, the Zlin was more than 1.4 miles outside the shoreline on the extended runway centerline. (Trial Ex. 1017, 1023 at 6.) It took the Zlin a full 60 seconds to reach the shoreline after Mr. Collins reported crossing it. *Id.*

165. The Court finds that this was a significant misstatement of his position, and misled the controller, the pilots of the second Cessna in the pattern, and, most likely, Ms. Hock.

166. In reliance on Mr. Collins' "just crossing the shoreline" position report, Mr. Fowler waited thirty-three seconds before telling Ms. Hock to turn to base leg. She responded to his direction: "turning right base." (Trial Ex. 160.)

167. This transmission would have alerted the other pilots in the airspace that she was flying the published traffic pattern for Runway 23 (right-turn traffic) and should have directed the Zlin pilots to visually search for a Cessna in that specific area. (Trial Ex. 1023 at 6.)

8. Vigilance so as To See and Avoid

168. The Federal Aviation Regulations (FARs) place responsibility for collision avoidance on the pilot. FAR 91.113(b) states: "vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft." (14 C.F.R. § 91.113.)

169. The Zlin pilots had ample opportunity to see and avoid Ms. Hock's airplane, both before and after they were on a collision course. (Trial Ex. 1023, 1009.)

170. The two airplanes were not on a collision course until they were both lined up on the straight-in approach for Runway 23. Approximately one minute elapsed from the time they were both lined up for Runway 23 until Mr. Collins collided with the rear of Ms. Hock's airplane. (Trial Ex. 1009, 1017.)

171. Mr. Collins' view of the Cessna was unobstructed during the entire one-minute time period leading up to the collision. The Cessna would have been ahead and only slightly below the horizon up until the last few seconds before impact. The Zlin's bubble canopy provided excellent visibility both vertically and horizontally, plus the Zlin was an aerobatic airplane, and could easily be maneuvered for better visibility. (Trial Ex. 1009, 1023.)

172. The Zlin pilots also had the opportunity to spot the Cessna well before they were on a collision course. When Ms. Hock was on her right downwind leg for Runway 23, Mr. Collins was on a long straight-in approach to Runway 23. At 3:02 p.m., the airplanes were approximately two miles apart. Soon after that time, the controller instructed Ms. Hock to start her base leg, and she announced that she was turning "right base." (Trial Ex. 1009.)

173. From the Zlin pilots' position, the Cessna would have been in front of them, flying from right to left. The Zlin pilots knew where to look for the Cessna, and should have been able to see it. (Trial Ex. 1009.)

174. After Ms. Hock's Cessna turned final in front of the Zlin, the rate of closure between the two airplanes was exceptionally slow – only twelve knots (fourteen miles per hour). This afforded the Zlin pilots a close-in view of the Cessna, right ahead of them, for an amazingly long period of time. At this rate of closure, the Cessna was approximately 1200 feet (one fifth of a mile) in front of Mr. Collins when Ms. Hock first established her

course on the final approach to Runway 23. After 30 more seconds, the Cessna was approximately 600 feet in front of Mr. Collins. (Trial Ex. 1009.)

175. The Zlin was about 300 feet behind the Cessna at fifteen seconds before impact, and the Zlin pilots would have had ample time to take evasive action even at that time. Given the Zlin's dual controls, either Mr. Collins or Mr. Luscher could have taken action to avoid the collision. (Trial Ex. 1009.)

176. The weather was Visual Meteorological Conditions (VMC) at the time of the collision. Visibility was reported as 10 miles or better and skies were clear. Some haze was reported out over the lake. The sun was above the horizon at approximately 20 degrees elevation and off to the left of the line of sight of the Zlin pilots. (Trial Ex. 1009.)

177. The witness pilots, Mr. Tross and Mr. Pieri, reported being able to see the Cessna at all times from when they entered the traffic pattern, and they saw the Zlin when it passed in front of them shortly before the collision. They were able to see both the Zlin and the Cessna when the three airplanes were lined up on final approach, having no problems with either the sun or the haze in seeing other aircraft. (Trial Ex. 172, 175-76, 1009.)

178. The Court finds that neither the sun nor the haze would have impeded Mr. Collins' view of Ms. Hock's airplane.

9. The Zlin Struck the Cessna from Behind

179. At 3:03 p.m. local time, Mr. Collins alerted the controller that he did not see the Cessna in front of him and Mr. Luscher: “negative contact with the Cessna in front of us.” (Trial Ex. 160 at 2103:19.)

180. This transmission was the first indication to those listening on the frequency that the Zlin pilots were confused about their relative sequence to the runway. (Trial Ex. 1023 at 6-7.)

181. Apparently trying to understand this puzzling transmission from the Zlin, Mr. Fowler responded with multiple transmissions to the Zlin and the Cessna to clarify their positions. This evident confusion and uncertainty should have led the Zlin pilots to re-emphasize their visual scan for traffic, to execute a missed approach, or climb to avoid the imminent conflict. (Trial Ex. 1023 at 7.)

182. Mr. Collins and Mr. Luscher were the only parties on the frequency who had accurate information about the location of Ms. Hock’s Cessna relative to their *actual* position to have been looking in the right place for the Cessna. *Id.*

183. Instead of taking immediate evasive action, the Zlin pilots continued to slowly overtake the Cessna from behind. It is inexplicable that they did not see the Cessna given that they had been alerted where to look for it, they were closing at an extremely slow speed, the Zlin canopy provides exceptional forward visibility, and the Zlin is easy to maneuver to enhance visibility if necessary. (See Advisory Circular 90-48C; Trial Ex. 1023 at 7.)

184. As the controller was communicating with Mr. Collins and Ms. Hock to

determine their positions, Mr. Collins reported that “five zulu alpha just had a midair.” (Trial Ex. 160 at 2104:00.)

185. There were no further communications from either aircraft. (Trial Ex. 160.)

186. The Cessna crashed on to a residential street, and the Zlin crashed into the medical facility.

187. Based on this communication and radar data, it appears the collision happened around 3:04 p.m. local time, at an altitude of 1400 feet MSL (Mean Sea Level). (Trial Ex. 1017.)

188. An inspection of the airplane wreckage revealed that the leading edge of the Zlin’s right wing struck the rudder of the Cessna, clearly indicating that the Zlin overran the Cessna and struck it from behind. (Trial Ex. 1017.)

10. Significance of Position Reporting

189. As a trained and experienced pilot, Mr. Collins was aware, or should have been aware, of the importance of accurate position reporting. (Trial Ex. 600, AIM ¶ 4-3-5, emphasis added.)

190. The radar data permits experts to analyze what the relative positions of the airplanes would have been if the Zlin’s final position report (“just crossing the shoreline”) had been accurate. In other words, if Mr. Collins had actually been at the shoreline when he stated he was at the shoreline, what would have transpired? (Trial Ex. 1017.)

191. Accident reconstructionist Kenneth L. Orloff, Ph.D., analyzed the data, and concluded that if Mr. Collins had been at the shoreline when he reported being there, his airplane would have been well past Ms. Hock’s airplane by the time Mr. Fowler told her

to turn her base. She would have followed him on final, and the witness Cessna would have followed directly behind her. When all three airplanes would have been lined up on final approach, the Zlin would have been in front, with Ms. Hock 1.4 miles behind him, and the witness Cessna 0.8 miles behind Ms. Hock. (Trial Ex. 1017.)

192. The Court finds that Mr. Collins' misreporting of his position caused the accident as a matter of fact, since the air traffic controller's plan would have worked out perfectly if Mr. Collins had simply been where he said he was.

11. Traffic Alerter Available for Mr. Collins' Airplane

193. In addition to the Zlin, Mr. Collins owned a Cessna 182. Mr. Collins had collision avoidance equipment in his Cessna 182, but not in the Zlin. (Trial Ex. 1009 at 8.)

194. At the time preceding the accident, there were two reasonably priced types of collision avoidance equipment available to general aviation pilots. One was called a "traffic alerter." It would indicate one's distance from another aircraft and would call out the word "TRAFFIC" over the pilot's intercom. When the other traffic was closer than one mile, it would call out "TRAFFIC NEARBY." *Id.*

195. If Mr. Collins had installed a traffic alerter in the Zlin, he would have seen the distance count down on the alerter as he approached Ms. Hock's Cessna, and would have heard the aural warning for more than a minute before impact. *Id.*

196. A traffic alerter cost around \$600 at the time before the accident, and was lightweight and portable, so it could be used in multiple airplanes. *Id.*

197. Another type of traffic avoidance system available before the accident was

the Traffic Alert and Collision Avoidance Device (TCAD). This device provides even more information by indicating the direction and relative altitude of the other traffic. Such devices cost around \$10,000 new, or less for a used model. *Id.*

12. Mr. Collins' Medical Disqualification and Impairment

198. To fly as a private pilot, one must have a valid medical certificate. To obtain a medical certificate, pilots must undergo a medical examination with an FAA-designated Aviation Medical Examiner. (Trial Ex. 1021.)

199. The medical standards are outlined in Part 67 of the Federal Aviation Regulations, 14 C.F.R. §§ 67.1 to 67.415.

200. Pilots are responsible for knowing, understanding, and complying with these regulations. (Trial Ex. 600, AIM ¶ 8-1-1.)

201. At a minimum, Mr. Collins was required to have a valid third class medical certificate. 14 C.F.R. § 61.23(3)(I).

202. On December 12, 1998, Mr. Collins presented himself to an Aviation Medical Examiner to obtain his medical certificate. Mr. Collins filled out an FAA Form 8500-8. (Trial Ex. 602, Collins' FAA Medical Records.)

203. The information on the form is required by the FAA so the agency can make a final and educated decision about whether a pilot qualifies for a medical certificate.

204. The form itself contains a warning that any falsification or concealment on the form is a crime under 18 U.S.C. §§ 1001, 3571.

205. The form requires pilots to check a "yes" or "no" box, answering whether

they use any medication or have ever had any of the listed medical conditions in their entire lives. The medical conditions include hay fever or allergy, heart or vascular trouble, and diabetes. The applicant is also required to report any visits to health professionals within the last three years. The applicant signs the form under certification that the statements and answers are true, and agrees that the FAA will use the answers as part of the basis for issuance of the medical certificate. (Trial Ex. 602.)

206. On December 12, 1998, Mr. Collins checked "no" for hay fever or allergy, heart or vascular trouble, and diabetes. He listed Claritin-D as the only medication he was taking, and listed his last aviation medical examination as the only visit to a health professional within the last three years. (Trial Ex. 602.)

207. Mr. Collins gave substantially similar responses at his medical examination in 1996. His responses at his 1994 exam were similar, except he checked the boxes for "Medical Rejection by Military Service" and "Admission to Hospital," with no explanation. In both 1994 and 1996 he checked "no" for any medications (prescription or nonprescription) being taken. (Trial Ex. 602.)

208. These examinations resulted in the issuance of a medical certificate to Mr. Collins. (Trial Ex. 602.)

209. Despite Mr. Collins' representations to the contrary, he had been treated for diabetes since at least 1994. (Trial Ex. 209.)

210. Over the six years before the accident, he had been taking four different medications for diabetes: Precose, Glucotrol-XL, Avandia, and Rezulin. (Trial Ex. 603.) This fact alone establishes that Mr. Collins knew he had diabetes, and had known it for

years.

211. Medical records reveal that, despite being treated for the disease for six years, Mr. Collins never achieved adequate control over his blood glucose levels. (Trial Ex. 207, 209, 1021.)

212. Other medical problems that Mr. Collins was required to report to the FAA, but did not, included: leg ulcers and diabetic neuropathy, chronic urinary tract infections, heart disease, chronic allergic rhinitis, and hyperlipidemia (elevated blood cholesterol levels). (Trial Ex. 1021.)

213. Mr. Collins was required to report the many medications he was taking for diabetes, chronic infections, hyperlipidemia, and allergies, but did not do so. (Trial Ex. 1021.)

214. The ethics, responsibilities, and medical reporting requirements are stressed repeatedly in FAA regulations and forms. *See* 14 C.F.R. Part 61 (certification, including medical), Part 67 (medical standards), Part 91 (operational requirements), Form 8500-8 (application completed by Mr. Collins), and AIM ¶ 8-1-1. The form itself indicates that a false answer may be a criminal offense. (Trial Ex. 602.)

215. Mr. Collins' medical certificate, and hence his pilot's certificate, was invalid from the first moment he was diagnosed with diabetes but failed to report it to the FAA. (Trial Ex. 1021.)

216. The diagnosis of diabetes is an automatically disqualifying condition. Mr. Collins was required to ground himself once he knew he had diabetes, and, if he wished

to keep flying, follow the proper channels within the FAA's aeromedical division to seek a "Special Issuance." (AIM, ¶ 8-1-1.)

217. All piloting activities Mr. Collins engaged in after knowing he had diabetes were in violation of both the medical standards of FAR Part 67 (14 C.F.R. § 67.313) and the prohibition on operating an aircraft during times of medical deficiency (14 C.F.R. § 61.53).

218. Among Mr. Collins' multiple health problems, diabetes was the most significant risk for flying. Mr. Collins' blood glucose was chronically elevated, despite the medication he was taking. Chronic blood glucose elevation damages the heart, eyes, kidneys, and neurologic system, including the brain.² (Trial Ex. 1021.)

219. Mr. Collins' diabetes was under poor control. This is documented by the following reading of his HbA1C levels, which show a two to three month average glucose level: 8.1% (8/4/99); 8.7% (11/4/99); 8.1% (2/6/00). The last of these tests was drawn just two days before the accident. The readings demonstrate the equivalent of blood glucose levels from 180 to over 200 milligrams per deciliter. Normal readings are closer to 100 or just under. The American Diabetes Association recommends an HbA1C goal of less than 7%. (Trial Ex. 1021.)

220. Mr. Collins' multiple medical impairments contributed to the accident. Poorly controlled diabetes is known to cause vision impairments and cognitive

² Short-term blood glucose elevations (such as eating lunch, which Mr. Collins did several hours before the accident) have also been shown to interfere with a diabetic's ability to think quickly and solve problems.

impairments. Aviation medical experts testified that it is highly probable that Mr. Collins was experiencing some of the transient and chronic visual disturbances that are known consequences of poorly controlled diabetes. (Trial Ex. 1021.)

221. Mr. Collins' other impairments included: (1) possible cognitive impairment as a result of elevated blood glucose, (2) fatigue (Mr. Collins typically woke up at 2:30 a.m. and would be in bed by 7:00 p.m.; thus the accident time of 3:00 p.m. was late in Mr. Collins' day; diabetes exacerbates fatigue); (3) chronic allergies and sinus infections for which Mr. Collins was taking medications that can cause fatigue, increased lacrimation (tearing) resulting in visual problems, headache, sinus infections, ear blockage, dizziness, and a general feeling of malaise; (4) medication interactions (the combination of pseudoephedrine and phenylpropanolamine can result in psychomotor side effects such as agitation, anxiety, vision disturbances, and exacerbation of fatigue); (5) silent heart disease (Mr. Collins had significant heart disease, never formally diagnosed but confirmed in the autopsy. His treating physician was concerned about his extreme obesity and "off the charts" high cholesterol levels, and had been working to schedule a cardiac scan shortly before the accident. "Silent ischemia" is a known medical condition that is common in diabetics, and refers to heart muscle starved for oxygen and blood due to blockages of the coronary arteries.); and (6) chronic infections, which exacerbate fatigue and malaise; and a host of miscellaneous conditions, including diabetic neuropathy, which is damage to the nerves caused by diabetes. (Trial Ex. 1021.)

222. Mr. Collins' multiple medical problems impaired his ability to see the airplane ahead, evaluate the threat, and react accordingly. (Trial Ex. 1021.)

223. Mr. Collins knew or should have known of the risks of flying while ill or on medication. "The safest rule is not to fly while suffering from any illness." (Trial Ex. 600, AIM ¶ 8-1-1.)

224. The AIM provides guidance on medical fitness for flight: "The standards for medical certification are contained in 14 C.F.R. Part 67. Pilots who have a history of certain medical conditions described in these standards are mandatorily disqualified from flying. These medical conditions include . . . *diabetes* requiring medication for its control." (Trial Ex. 600, AIM ¶ 8-1-1, emphasis added.)

225. Aviation medical experts testified, and the Court finds, that even if a pilot's symptoms are under control, he or she is not fit to fly when ill: "Even a minor illness suffered in day-to-day living can seriously degrade performance of many piloting tasks vital to safe flight. Illness can produce fever and distracting symptoms that can impair judgment, memory, alertness, and the ability to make calculations. Although symptoms from an illness may be under adequate control with a medication, the medication itself may decrease pilot performance." (Trial Ex. 600, AIM ¶ 8-1-1.)

226. The AIM also contains warnings about flying while taking any medication whatsoever, and about flying while fatigued. (Trial Ex. 600, AIM ¶ 8-1-1.)

G. FAA Oversight of the Contractor

227. Plaintiffs claim the FAA should have made Mr. Fowler take a break during his work day, which he did not do.

228. There is no evidence of any sort of problem with Mr. Fowler. He had worked at the Waukegan Tower since 1990, and was the Manager of the Tower. It is undisputed that he was properly qualified and licensed. If anyone would have noticed a problem with him, it would have been his own employer, not the FAA, which was only in the tower for the evaluation once every two years.

229. Mr. Fowler, as the manager, was responsible for scheduling a break for himself if he wanted one. Mr. Fowler was not required to take a break, and the FAA was not there to ask him if he wanted to take one. It was up to Mr. Fowler to make that decision, and he evidently did not feel that he needed a break.

230. If Mr. Fowler had needed one, he could have asked either of the two other Midwest controllers who worked that day (George Kline Edler and Eunice Philbin-King) to relieve him.

II. CONCLUSIONS OF LAW

A. The Court Lacks Subject Matter Jurisdiction Because the United States May Not Be Held Liable for the Acts of an Independent Contractor.

231. The United States cannot be held vicariously liable for the negligence of an employee of a contractor, nor for negligence in merely failing to monitor or supervise the contractor.

232. The Federal Tort Claims Act grants federal courts jurisdiction over damages

claims against the United States “for injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment.” 28 U.S.C. § 1346(b).

233. An “employee of the government” includes military personnel and “employees of any federal agency.” 28 U.S.C. § 2671.

234. The term “federal agency” expressly excludes “any contractor with the United States.” 28 U.S.C. § 2671.

235. The United States thus may not be held liable for the acts of an independent contractor or its employees. *Logue v. United States*, 412 U.S. 521 (1973); *see also United States v. Orleans*, 425 U.S. 807 (1976).

236. The Court concludes that *Alinsky v. United States*, 415 F.3d 639 (7th Cir. 2005) is directly on point and binding on this case.

237. Under *Alinsky*, the United States cannot be held vicariously liable for the negligence of Midwest or its employees, nor for the FAA’s alleged negligence in failing to monitor or supervise the contractor.

B. The Court Lacks Subject Matter Jurisdiction Because the Radar Display Allegations Are Barred by the Discretionary Function Exception to the Federal Tort Claims Act.

238. The Government has not waived its immunity under the Federal Tort Claims Act for claims “based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.” 28 U.S.C. §

2680(a).

239. The discretionary function exception is designed to “prevent judicial ‘second-guessing’ of legislative and administrative decisions grounded in social, economic, and political policy.” *United States v. Gaubert*, 499 U.S. 315, 323 (1991) (quoting *United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 814 (1984)); *Berkovitz v. United States*, 486 U.S. 531, 536-37 (1988). Where the exception applies, the court lacks subject matter jurisdiction. *Grammatico v. United States*, 109 F.3d 1198, 1200 (7th Cir. 1997).

240. The discretionary function exception “marks the boundary between Congress’ willingness to impose tort liability upon the United States and its desire to protect certain governmental activities from exposure to suit by private individuals.” *Varig Airlines*, 467 U.S. at 808. Recognizing that tort actions challenging the government’s discretionary policy judgments could “seriously handicap efficient government operations,” *id.* at 814, Congress retained the government’s sovereign immunity in this area.

241. The Supreme Court has established a two-part inquiry to guide the application of the discretionary function exception. *See Berkovitz*, 486 U.S. at 536-37; *Calderon*, 123 F.3d at 949. First, the Court must determine if the government violated a mandatory policy, statute, or regulation specifically prescribing a course of action. Second, the Court must determine if the conduct is of the type the exception was designed

to protect, *i.e.*, whether the government's action is "susceptible to policy analysis."

Gaubert, 499 U.S. at 325.

242. In similar cases throughout the country, courts have consistently held that the FAA's decisions of how to allocate its limited resources for aviation safety equipment, airport or airspace design, and airport procedures are protected from suit by the discretionary function exception. *See, e.g., West v. Federal Aviation Admin.*, 830 F.2d 1044 (9th Cir. 1987) (FAA's decisions about establishing airport departure procedure fell within the discretionary function exception); *Colorado Flying Academy, Inc. v. United States*, 724 F.2d 871, 876-77 (10th Cir. 1984) (FAA's decisions involving airspace design fell within discretionary function exception); *Miller v. United States*, 522 F.2d 386, 387 (6th Cir. 1975) (FAA's decisions not to promulgate more stringent air safety regulations or to activate additional navigation aids at the accident airport fell within discretionary function exception); *Momen v. United States*, 946 F. Supp. 196, 201 (N.D.N.Y. 1996) (FAA's decisions regarding design, construction, and maintenance of navigational equipment protected from suit by discretionary function exception); *Rulli v. United States*, 581 F. Supp. 1502, 1506-08 (W.D. Pa. 1984) (claims of radar and radio communication equipment deficiencies dismissed under the discretionary function exception).

243. In a strikingly similar case, a district court in Florida held that the Air Force's decision not to install a radar facility was protected from suit by the discretionary function exception. *Scruggs v. United States*, 959 F. Supp. 1537, 1548 (S.D. Fla. 1997). The *Scruggs* court held, "decisions pertaining to expenditure of funds for radar sites and

personnel training clearly involve the balancing of social, economic and political objectives and, thus, fall squarely within the protection of the discretionary function exception to the FTCA.” *Scruggs*, 959 F. Supp. at 1548.

244. In *Alinsky*, the Seventh Circuit did not reach the issue of whether the FAA was negligent in failing to install radar equipment because the plaintiffs withdrew that argument on appeal. *Id.* at 648. The radar issue was presented to the district court in a motion to amend the complaint, and the court refused to allow the amendment, finding that the radar allegations would be futile as a matter of law. *Alinsky*, 2002 WL 844714 (N.D. Ill. May 1, 2002). In support of the holding that the radar allegations would be futile, the district court cited the *Scruggs* case, *supra*.

245. The Court concludes that this case must follow the unanimous line of decisions. Under the first prong of the discretionary function analysis, the Court finds and concludes that there was no statute, regulation, or policy requiring the FAA to install a radar display at the Waukegan Tower, nor did the Contract require a radar display.

246. The second prong is satisfied by showing that equipment allocation decisions are policy-based. The FAA’s equipment allocation policy satisfies this prong, (Trial Ex. 4, APS-1), along with the testimony of Mr. Belger, Mr. Morgan, and others.

247. The FAA’s equipment policy decisions require balancing interests, allocating scarce resources, working with Congress, and setting priorities – exactly the factors that define a “classic discretionary function.” *Bibeau v. United States*, 339 F.3d 942, 946 (9th Cir. 2003); *see also Stockberger v. United States*, 332 F.3d 479, 480 (7th Cir. 2003).

C. The Court Lacks Subject Matter Jurisdiction Because the Evaluation Issues Are Barred From Suit by the Discretionary Function Exception.

248. Similarly, the discretionary function exception bars the allegations that the FAA should have performed additional evaluations on Midwest's performance at the Waukegan Tower.

249. The FAA made a decision to leave the operation of contract towers entirely up to the contractor, with only biennial spot-checking to see if the Contract was being fulfilled. The FAA conducted its biennial evaluation at Waukegan six months before the accident. (Exs. 42, 43.)

250. The FAA thus completed the only mandatory evaluation. Any evaluations above and beyond the required one were at the FAA's discretion.

251. The court in *Alinsky* held that the discretionary function exception applies to the allegations of "negligent oversight." 415 F.3d at 647. The court ruled that the plaintiffs failed to identify any mandatory statute or regulation dictating how the FAA must oversee private contractors. *Id.* at 647. The court then ruled that the policy prong was satisfied by the FAA's policies of trying to save money and re-open smaller air traffic control facilities through the Contract Tower Program. *Id.* at 648.

252. The same analysis applies to this case. Plaintiffs have failed to show that the FAA violated any specific, mandatory directive in its oversight and evaluations of the Waukegan Tower. The FAA's policies for such oversight stem from social, economic, and political factors. Accordingly, the Court dismisses these allegations under the discretionary function exception.

D. Plaintiffs Bear the Burden of Proof Under Illinois Negligence Law.

253. With respect to the alleged negligence issues, Plaintiffs state a cause of action for negligence by establishing: (1) that the defendant owed a duty of care to the plaintiffs; (2) the defendant breached the duty; (3) an injury occurred; and (4) the injury was proximately caused by the defendant's breach. *Curatola v. Village of Niles*, 608 N.E.2d 882 (Ill. 1993).

254. Plaintiffs have the burden of proving negligence by a preponderance of the evidence. *Lukasik v. Hajdas*, 244 N.E.2d 404, 406 (Ill. App. Ct. 1969).

255. "The mere happening of an accident does not of itself raise any presumption of negligence on the part of a defendant." *Id.*

256. In their various Complaints, Plaintiffs allege that the FAA failed to perform tasks specifically delegated to the contractor (training, staffing, providing air traffic control services), failed to evaluate the contractor properly, and failed to install a radar display in the tower.³

257. To the extent a legal duty even exists for such allegations under Illinois law, *see generally Baker v. F.F. Investment Co.*, 489 F.2d 829, 835 (7th Cir. 1973), *overruled on other grounds*, *FDIC v. Citizens Bank & Trust Co.*, 592 F.2d 364, 370-71 (7th Cir. 1979) (holding no duty under Illinois law in FTCA case), Plaintiffs are unable to show that the United States breached any such duty or caused the accident.

³ Other allegations in the Complaints were not pursued at trial and the Court finds they have been abandoned, such as allegations that the air traffic controllers at O'Hare somehow should have prevented the accident, or that controller Gregory Fowler was not qualified to provide air traffic control services.

E. The “Reasonably Prudent Person” Standard of Care Applies.

258. To prove negligence, Plaintiffs must show that FAA employees failed to exercise that standard of care that a reasonably prudent person would have exercised under the circumstances. *Rodgers v. Withers*, 593 N.E.2d 669, 672 (Ill. App. Ct. 1992).

259. The law does not say how a reasonably prudent person would act under the circumstances presented to the Court here. That is for the Court to decide as the finder of fact. *Vinke v. Artim Transp. System, Inc.*, 408 N.E.2d 1112, 1117-18 (Ill. App. Ct. 1980).

260. In determining whether FAA personnel acted in a reasonably prudent manner, the Court finds that the law does not obligate a person to make what may later prove to be a better decision, only one that a reasonably prudent person would adopt if placed in a similar position. *Yager v. Illinois Bell Telephone Co.*, 667 N.E.2d 1088, 1092 (Ill. App. Ct. 1996); *Eckel v. O’Keefe*, 627 N.E.2d 166, 170 (Ill. App. Ct. 1993).

F. Illinois Comparative Fault, Joint & Several Liability

261. A tort plaintiff is barred from recovering damages if the Court finds that the plaintiff’s contributory fault is more than 50% of the proximate cause of the injury for which recovery is sought. If the plaintiff’s fault is 50% or less, then the plaintiff’s recovery shall be diminished in proportion to his or her allocation of fault. 735 ILCS 5/2-1116; *Bd. of Trustees of Comm. College Dist. No. 508 v. Coopers & Lybrand*, 803 N.E.2d 460, 465 (Ill. 2003) (explaining that 5/2-1116 was amended by the legislature in 1995, but the amendment was found unconstitutional, so the 1986 provision discussed above remains the law).

262. The percentage of fault of the parties also impacts joint and several liability. Any defendant whose fault is less than 25% of the total fault of the accident is severally liable for his or her portion of damages only. 735 ILCS 5/2-1117 (1986 version of the law). A defendant whose fault is 25% or greater is jointly and severally liable.

G. The FAA Acted in a Reasonably Prudent Manner in Declining To Install a Radar Display in a Non-Radar Tower.

263. The Court finds and concludes that the FAA acted reasonably at all times, given the circumstances prior to the accident, and thus breached no duty owed to Plaintiffs.

264. With respect to *certified* DBRITE displays, there were no new displays available. A reasonably prudent FAA employee thus could not put one in the Waukegan Tower even if Waukegan Tower had requested one and justified an operational need for it. With no new equipment available, a low-activity, non-commercial, Non-Radar Tower like Waukegan was not going to get equipment ahead of much busier facilities, or take equipment away from facilities that already had it. Once Waukegan was placed on the priority list for a certified display, it was number 51 on the list, meaning that 50 towers were ahead of it in line to get a display. (Trial Ex. 32, List dated Feb. 29, 2000.) By August 2000, Waukegan had dropped to 58th place on the list. (Trial Ex. 604, List dated 8/31/00.)

265. The FAA also acted reasonably with respect to *uncertified* displays, such as TARDIS. Neither the airport authority nor the tower operator (Midwest) requested an uncertified display. The TARDIS was an extremely rare system, installed in just nine

facilities at the time of the accident. The TARDIS was not a nationally supported system, and it was highly unusual for one to be installed. Most of the witnesses in this lawsuit have never even seen a TARDIS.

266. Within the agency, many employees ranging from line engineers to the Administrator of the FAA expressed concern over non-standard systems like TARDIS, which are uncertified, unreliable, unfunded, and create maintenance problems due to the lack of parts in inventory. The agency was already working on – and Congress had funded – two certified tower display systems, and did not want more uncertified systems like TARDIS.

267. Plaintiffs fail to identify any event prior to the accident that would have made the FAA consider putting any type of radar display in the Waukegan Tower instead of the many other air traffic control towers without radar displays, over 50 of which had more traffic than Waukegan.

268. There is no evidence that the FAA acted unreasonably in failing to consider Waukegan Tower for installation of a terminal radar display, either certified or uncertified. To the contrary, the Waukegan Tower was treated just like the other Non-Radar Towers that lacked radar displays.

H. The FAA Acted Reasonably In the Administration of the Contract with Midwest Air Traffic Control.

269. The Court finds and concludes that the FAA acted reasonably in its administration of the Contract with Midwest.

270. Plaintiffs presented no evidence that the FAA treated Waukegan any

differently than other contract towers.

271. Plaintiffs presented no evidence of anything wrong with the FAA's biennial evaluation of the Waukegan Tower, completed without incident six months before the accident.

272. Plaintiffs presented no evidence that the FAA was on notice of any problems with controller Gregory Fowler.

273. There is no evidence that Mr. Fowler was required to take a break, or that the FAA should have done something to make him take a break.

274. In sum, Plaintiffs cannot prove that the FAA acted unreasonably in light of the circumstances.

I. The United States Is Entitled To Judgment Because the Zlin Pilots Caused the Accident.

275. Plaintiffs failed to prove that the FAA's alleged breach was the legal cause of the accident.

1. The Zlin Pilots' Actions Were the Proximate Cause of the Accident.

276. Mr. Collins caused the accident by flying while medically impaired, misreporting his position several times, failing to comply with the controller's directions to keep his speed up, failing to see and avoid the Cessna, failing to take evasive action, and running into the Cessna from behind.

277. Mr. Luscher contributed to the accident by also failing to see and avoid the Cessna.

278. The actions of the Zlin pilots were the sole cause of the accident. If the Zlin

had crossed the shoreline when Mr. Collins reported crossing the shoreline, this accident never would have happened.

279. “The pilot is in command of his aircraft. He is directly responsible and has final authority for its operation. *See* 14 C.F.R. § 91.3(a).” *Davis v. United States*, 824 F.2d 549, 550 (7th Cir. 1987).

280. “The pilot has a continuing duty to be aware of danger when he can gather adequate information with his own eyes and instruments” *Id.* at 551.

281. In Illinois, “the violation of a statute or ordinance designed for the protection of human life or property is *prima facie* evidence of negligence.” *French v. Springfield*, 357 N.E.2d 438, 440 (Ill. 1976) (quoted in *Avemco Ins. Co., Inc. v. Elliott Aviation Flight Serv., Inc.*, 86 F. Supp. 2d 824, 829-30 (C.D. Ill. 2000)).

282. The Court considers whether the injured party was intended to come within the scope of the protection afforded by the regulation, and whether the injury was proximately connected with the violation of the regulation. *Id.*

283. The evidence of *prima facie* negligence may be rebutted by proof that the party acted reasonably under the circumstances, despite the statutory violation. *Avemco*, 86 F. Supp. 2d at 829; *see also Kalata v. Anheuser-Busch Cos.*, 581 N.E.2d 656, 661 (Ill. 1991).

284. Here, there are several relevant federal regulations (in addition to medical regulations, discussed below). Part 91 of the Federal Aviation Regulations (FARs) is a pilot’s “rules of the road,” and pilots are charged with knowing the regulations. *See* 14 C.F.R. parts 61 and 91; *In re N-500L Cases*, 691 F.2d 15, 28 (1st Cir. 1982).

285. FAR 91.13 “Careless or reckless operation,” provides: “No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.” 14 C.F.R. § 91.13.

286. FAR 91.111 provides: “No person may operate an aircraft so close to another aircraft as to create a collision hazard.” 14 C.F.R. § 91.111.

287. FAR 91.113 provides: “When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft.” 14 C.F.R. § 91.113.

288. The District Court in *Avemco* found that the FARs “were enacted to protect both the lives of pilots and their passengers, as well as the property that is the aircrafts in which they fly. Consequently, both [pilots] are of the class of people which the regulations are designed to protect; and the subject aircraft is the kind of property which the regulations are designed to protect. The Court will therefore consider these regulations in determining whether [the pilots] breached the standard of care they owed to each other” *Avemco*, 86 F. Supp. 2d at 830.

289. Mr. Collins breached his duty to act as a prudent pilot would act under the circumstances, as required by the FARs.

290. Mr. Collins’ position reporting alone constituted a “careless and reckless operation.” FAR 91.13.

291. The testimony of the eyewitness pilots in the second Cessna in the pattern proves that Mr. Collins’ position reports were misleading. These witnesses were

surprised when the Zlin suddenly crossed in front of them. Both witness pilots had established a mental picture of where the aircraft should be by listening to the position reports, and they anticipated that the Zlin was closer to the airport and in front of Ms. Hock's Cessna. This is the same picture that controller Gregory Fowler had in his mind based on Mr. Collins' position reports.

292. A reasonably prudent pilot would not have reported that he was "just crossing the shoreline" when he was in fact 1.4 miles away from the shoreline, especially when he heard over the radio that two other airplanes were on extended downwind and would be following him. The word "just" emphasizes the exactness or precision of the report, as it would if a person stated he was "just passing a street" or "just entering" a building.

293. A reasonably prudent pilot would not have slowed down after an air traffic controller told him to keep his speed up. If he did slow down, a reasonably prudent pilot would have told the controller what he was doing.

294. A reasonably prudent pilot would have been scanning continuously, especially in the direction where a pilot reported to be turning her base leg in front of him, and would have seen the other airplanes in the pattern.

295. With respect to equipment issues, the Court finds that Mr. Collins could have purchased and installed a traffic alerter device in the Zlin.

296. Such devices were cheap and available, and well known to Mr. Collins since he had one in his other airplane.

297. If Mr. Collins had a traffic alerter in the Zlin, this accident could have been

avoided.

2. The Zlin Pilots' Actions Were the Intervening Efficient Cause of the Accident.

298. Illinois courts make a distinction between cause in fact and legal causation.

See Chicago v. Beretta U.S.A. Corp., 821 N.E.2d 1099, 1133-34 (Ill. 2004).

299. When “a plaintiff’s injury directly results from the subsequent, independent act of a third person,” the Court must ask “whether the *intervening efficient cause* was of a type that a reasonable person would see as a likely result of his or her conduct.” *Id.*, quoting *First Springfield Bank & Trust v. Galman*, 720 N.E.2d 1068, 1068 (Ill. 1999) (emphasis added).

300. “There may be more than one proximate cause of an injury. But if two wholly independent acts, by independent parties, neither bearing to the other any relation or control, cause an injury by one creating the occasion or condition upon which the other operates, the act or omission which places the dangerous agency in operation is the efficient intervening cause that breaks the causal connection and makes the other act or omission the remote and not the proximate cause of the injury.” *Id.*, quoting *Merlo v. Public Serv. Co. of N. Ill.*, 45 N.E.2d 665 (Ill. 1942).

301. The Court finds and concludes that the lack of a radar display created a normal, passive condition at the airport.

302. Mr. Collins’ errors, however, were entirely of his own making, and did not flow from the FAA’s equipment allocation decisions.

303. In looking at whether the FAA could have reasonably anticipated the Zlin

pilots' negligence, the question is not whether the FAA could have anticipated a collision at an airport that lacked radar services. Rather, the question is whether the FAA could have anticipated the whole string of negligent, even reckless, decisions made by Mr. Collins.⁴

304. The Illinois Supreme Court explained the analysis as follows:

We have no quarrel with First Springfield's assertion that 'it was readily foreseeable that at school closing time school children might be crossing the street, and 16-year-old Angela Galman might need both lanes of traffic to avoid an accident.' That, however, is not the question. The question is whether it was reasonably foreseeable that violating a 'no parking' sign at mid-block would likely result in a pedestrian's ignoring a marked crosswalk at the corner, walking to mid-block, and attempting to cross a designated truck route blindly and in clear violation of the law. Clearly, it would not. May Phillipart's decision to jaywalk, while undeniably tragic and regrettable, was entirely of her own making. Dobson and ADM neither caused Phillipart to make that decision, nor reasonably could have anticipated that decision as a likely consequence of their conduct. One simply does not follow from the other.

Galman, 720 N.E.2d at 1073.

305. The FAA's decision-making on radar displays was wholly independent of Mr. Collins' decisions to misreport his position and fly while medically impaired, and the failure of both Zlin pilots to see and avoid an airplane that was directly in front of them for an entire minute at the very slow closure rate of 12 knots.

306. The FAA did not cause Mr. Collins to make the decisions he made on the flight, nor did Mr. Collins cause the FAA to make any decisions about radar displays at

⁴ Given that air traffic controllers are not required to foresee the negligent or unlawful acts of pilots, *Davis v. United States*, 824 F.2d 549, 555 n.2 (7th Cir. 1987), the same should be true for the FAA employees making equipment allocation decisions.

the Waukegan Tower before the accident.

307. Mr. Collins' actions were the efficient intervening cause that breaks the causal connection.

308. The Court concludes that the FAA's equipment allocation decisions are not the proximate cause of the accident under Illinois law.

3. Mr. Collins' Medical Impairment Was a Proximate Cause of the Accident.

309. In misreporting his medical condition on the FAA medical form, Mr. Collins also violated a statute designed to protect human life, which is again *prima facie* evidence of negligence.

310. Mr. Collins violated sections of FAR Part 61 and Part 67.

311. FAR 67.313: "The general medical standards for a third-class airman medical certificate are: (a) No established medical history or clinical diagnosis of diabetes mellitus that requires insulin or any other hypoglycemic drug for control." 14 C.F.R. § 67.313.

312. FAR 61.53: "Prohibition on operations during medical deficiency: a person who holds a current medical certificate issued under part 67 of this chapter shall not act as pilot in command, or in any other capacity as a required pilot flight crewmember, while that person: (1) Knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the medical certificate necessary for the pilot operation; or (2) Is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the

requirements for the medical certificate necessary for the pilot operation.” 14 C.F.R. § 61.53.

313. FAR 67.403: “Applications, certificates, logbooks, reports, and records: Falsification, reproduction, or alteration; incorrect statements: (a) No person may make or cause to be made – (1) A fraudulent or intentionally false statement on any application for a medical certificate” 14 C.F.R. § 61.53.

314. The reason for FAA aviation medical examinations is to keep medically impaired pilots from flying, for both the pilot’s own safety and the safety of others in the airspace and on the ground.

315. If Mr. Collins had reported his medical conditions to the FAA, this accident would not have happened. Accordingly, *prima facie* evidence of Mr. Collins’ negligence has been established. *Kalata v. Anheuser-Busch Cos.*, 581 N.E.2d 656, 661 (Ill. 1991).

316. Plaintiffs can rebut the *prima facie* evidence of negligence by showing that Mr. Collins acted reasonably. Plaintiffs have not done so.

317. On each of the three FAA medical forms filled out by Mr. Collins since he had been diagnosed with diabetes, he checked “no” instead of “yes” on the questions of whether he had diabetes, had other significant medical issues, or was taking medications.

318. A reasonably prudent pilot would not have omitted disqualifying medical conditions.

319. In addition to the *prima facie* evidence of negligence, the Court concludes that Mr. Collins' medical conditions and medications contributed to the accident by impairing his ability to see the airplane ahead, evaluate the threat, and react accordingly.

J. Damages

1. Mr. Collins

320. Mr. Collins was survived by his wife, Christine Collins. They had no children.

321. Defendant's accounting expert testified that Mr. Collins' lost earning capacity totals no more than \$3,822,185, net of income taxes. If taxes are *not* subtracted, Mr. Collins' lost earning capacity, if any, totals no more than \$6,328,121. The latter figure includes earnings required to pay income taxes.

322. Plaintiffs' economist testified that Mr. Collins' lost earning capacity was around \$20 million.

323. The main difference in the two figures is based on the differing assumptions of how long Mr. Collins would have continued working.

324. Mr. Collins was the morning radio host for WGN Radio. He had a five-year contract that would have expired in December 2004.

325. Plaintiffs' expert assumed Mr. Collins would have signed another five-year contract at that time, which, in addition to being speculative, would have resulted in Mr. Collins' working up to age 68, well beyond the average work life expectancy calculated by economists.

326. Plaintiffs' assumptions also fail to take into account Mr. Collins' poor health, grueling schedule, the unfavorable changes to the radio landscape, or the entirely new WGN management team that would have been negotiating any new contract.

327. The Court finds Plaintiffs' assumption that Mr. Collins would have signed another contract on similar terms to be speculative.

328. The Court will also take into consideration the effect of income taxes on Mr. Collins' lost income claim.

329. Although Illinois law prohibits instructing the jury on the effect of taxes on a lost income claim, Ill. Pattern Jury Instr. Civil 31.04, *Klawonn v. Mitchell*, 475 N.E.2d 857 (Ill. 1985); *McCann v. Lisle-Woodridge Fire Protection Dist.*, 450 N.E.2d 1311 (Ill. App. Ct. 1983), this Court is the fact finder in a federal trial.

330. The basis for the state-law exclusion appears to be that Illinois state courts consider taxes to be too "complex" for a jury. *Klawonn*, 475 N.E.2d at 861.

331. Illinois' wrongful death statute itself makes no mention of taxes: "[I]n every such [wrongful death] action the jury may give such damages as they shall deem a fair and just compensation with reference to the pecuniary injuries resulting from such death, to the surviving spouse and next of kin of such deceased person." 740 Ill. Comp. Stat. Ann. § 180/2.

332. This Circuit has held that evidence of taxes is admissible. *In re Air Crash Disaster Near Chicago, Ill. on May 25, 1979*, 701 F.2d 1189, 1195 (7th Cir. 1983). The appellate court specifically rejected the "too confusing" argument, noting that "a federal court may assess its own capabilities differently, and logically should not be bound by the

state court's self-evaluation. . . . Indeed, to the extent that the exclusionary rule is based on fear of confusion, it should not apply in federal court because Fed. R. Evid. 403 provides a federal standard for rejecting relevant evidence on the grounds of risk of prejudice, confusion, or waste of time, and, as shown above, the Federal Rules generally displace differing state rules even when the state rule is 'outcome-determinative.'" *Id.*; *see also Opio v. Wurr* , 901 F. Supp. 1370, 1373 -74 (N.D. Ill. 1995) (discussing *In re Air Crash* decision).

333. The Court is capable of understanding the expert economists' testimony on taxes, and has come to its own conclusion on what constitutes fair compensation.

334. The Court finds that failing to consider taxes would result in the overstatement of actual economic losses to Mr. Collins' Estate by approximately \$2.5 million because it would include damages that would have been paid in taxes had Mr. Collins survived.

335. Accordingly, the Court finds and concludes that the lost income for the Collins claim is \$3,822,185.

2. Ms. Hock

336. Ms. Hock was survived by her father, Edward J. Hock, and her sister, Margaret Kohler. They have not claimed economic damages, and are thus seeking only non-economic damages.

337. In addition to the wrongful death claim, Ms. Hock's Estate brings a claim for survival, 755 Ill. Comp. Stat. Ann. § 5/27-6, seeking to recover for conscious pain and suffering prior to Ms. Hock's death.

338. “To recover damages, a plaintiff must prove that the decedent actually and consciously suffered pain before death; where the death is instantaneous or where the decedent is rendered immediately unconscious, an action for pain and suffering cannot be sustained.” *Lewis v. Chicago*, 2005 WL 947195 (N.D. Ill. 2005) (citing *In re Air Crash Disaster*, 507 F. Supp. 21, 24 (N.D. Ill. 1980)).

339. Plaintiffs have the burden of proving that Ms. Hock was injured and conscious after the mid-air collision until her airplane struck the ground.

340. Unlike Mr. Collins, Ms. Hock made no radio transmissions after the mid-air, and may have been rendered unconscious by the impact of the collision itself. (Trial Ex. 160.)

341. Plaintiffs have failed to meet their burden of proving survival and consciousness, including conscious pain and suffering, in the moments after the airplanes collided but before Ms. Hock’s airplane struck the ground.

342. Accordingly, the Court will consider damages for the wrongful death claim only, and not the survival claim.

3. Mr. Luscher

343. Mr. Luscher was survived by his wife, Rise Barkhoff, and son Evan Luscher, who was 12 years old at the time of the accident.

344. They have not claimed economic damages, and are seeking only non-economic damages.

345. Mr. Luscher’s Estate also brought a survival action, and has the burden of proving that Mr. Luscher was conscious and injured after the mid-air collision.

346. Plaintiffs have failed to meet their burden of proving conscious pain and suffering in the moments after the airplanes collided but before the Zlin crashed into the hospital.

347. Accordingly, the Court will consider damages for the wrongful death claim only, and not the survival claim.

4. Cancer Treatment Centers of America

348. The parties have stipulated that the total economic damages caused to Plaintiff Cancer Treatment Centers of America was \$28 million.

CONCLUSION

349. Having set forth its Findings of Fact and Conclusions of Law, the Court finds and concludes that it lacks subject matter jurisdiction over the allegations against the United States.

350. In the alternative, the Court finds and concludes that Defendant United States of America was not negligent, and even if negligent, the actions of its employees were not the cause in fact or the proximate cause of this accident.

351. Accordingly, the Court will enter judgment in favor of Defendant United States of America.

DATED this 5th day of February, 2006.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that the “Defendant United States’ Pretrial Proposed Findings of Fact and Conclusions of Law” was filed electronically with the Court and served, via the Court’s ECF system, this 5th day of February, 2007, to the counsel who are Filing Users. The United States shall comply with Local Rule 5.5 as to any party who is not a Filing User or represented by a Filing User.

/s Jill Dahlmann Rosa
Employee, U.S. Department of Justice